Answers

Diploma in Financial Management Examination – Module A
Paper DA1, incorporating subject areas:
Interpretation of Financial Statements
Performance Management

December 2005 Answers and Marking Scheme

Section A

1 A

Both of these items are the responsibility of the board of directors. The external auditors are required to consider whether the accounting policies selected by the directors are appropriate and have been correctly and consistently applied, and to express an opinion as to whether or not the financial statements give a true and fair view.

2 B

The Urgent Issues Task Force (UITF) considers issues which are not adequately covered by existing standards. The decision of the UITF is published as an Abstract.

3 C

Assets and the related liability should not be offset. Under the terms of the loan, two repayments (total £16,000) fall due within the next twelve months, with the balance (£64,000) being due for repayment after more than one year.

4 C

Assets sold	NBV	£273,790	Purchases	£568,900 outflow
	Loss	£15,850		
	Cash received	£257,940 inflow	Net cash flow	£310,960

5 D

Both the depreciation charge and the impairment loss have been included in the calculation of profit after tax. Thus the only adjustment required is for the unrealised gain.

Profit after tax	£1,695,800
Unrealised gain	£255,900 = £1,951,700

6 D

Earnings is the amount of profit attributable to ordinary shareholders. This can be calculated by adding the ordinary dividend and retained profit (£3,715,500). Earnings per share is found by dividing earnings by the number of ordinary shares (1·5 million).
Thus £3,715,500 ÷ 1,500,000 = 247·7p

7 B

As the error has been corrected by the year end, both retained profit and net assets are correctly stated. Adjustment of the error will reduce the retained profit brought forward at the beginning of the 2005 year (and therefore the 2004 net assets) and increase the profit for the 2005 year. These adjustments will cancel one another out in the 2005 year.

8 C

Net book value	£2,567,900	
TWDV	£1,670,000	
Timing difference	£897,900 x 22% =	£197,538
	Balance brought forward	£104,320
	Thus increase = charge to P&L	£93,218

9 B

The reduction in stock means that the net assets will be reduced, leading to a reduction in the current ratio.
The new loan will increase the level of debt, leading to an increase in the gearing ratio.

10 C

The conditions relating to the accident existed at the balance sheet date. This means that this is an adjusting post balance sheet event, and the additional loss must be recognised.

11 D

Total cost per unit	£16			
Less Fixed cost	£3	=	Variable cost per unit	£13
Selling price per unit	£25	thus	Contribution per unit	£12

Break even point is when volume is $\frac{\text{£3 per unit x 275,000}}{\text{£12}}$ = 68,750 units

Thus margin of safety = 275,000 – 68,750 = 206,250

12 C

Fixed cost £825,000 + Profit £100,000 = Target contribution £925,000
This is achieved when volume is £925,000 ÷ £12 = 77,083 units

13 D

A sunk cost is a cost which has been incurred and cannot be recovered.

14 A

The opportunity cost is the benefit foregone by choosing a particular option, instead of the next best option.
(B = differential cost; C = committed cost; D = notional cost)

15 B

Variable (or marginal) cost is £36 per unit.
A margin of 40% means that cost is 60% of selling price.
Thus selling price is £36 x 100/60 = £60.

16 C

17 A

	Profit	£3,890,000
less	Economic value (£29·2 m) x WACC =	£3,796,000
=	EVA®	£94,000

18 C

By using a higher grade of staff, the staff cost per hour is increased above standard leading to an adverse variance.
Lower grade materials would cost less than standard, leading to a favourable variance.

19 B

Outsourcing is likely to lead to short term costs, as the sub-contractor must be monitored to ensure that the required standards are being met. In the long term, the improved utilisation of resources from concentrating on core competences should lead to improvements in quality and customer satisfaction – and cost savings.
It is a key idea in outsourcing that only non-core competences should be outsourced, leaving the organisation to concentrate resources on the in-house completion of core competences.

20 B

Design	Variable costs £29 x 2,400 hours	£69,600
	Fixed costs	£56,160
		£125,760
	Profit = 40% mark up	£50,304
	Cost to production section	£176,064
Production	Variable costs £35 x 7,000	£245,000
	Fixed costs	£172,000
	Total costs	£593,064
	Revenue £90 x 7,000 hours	£630,000
	Profit	£36,936

Section B

1 (a)

	Preference shares	Ordinary shares
Dividend	specified by the terms on which the share was issued.	dividend is payable at the discretion of the directors.
	usually at a fixed rate.	variable.
	often guaranteed by terms.	dependent on cash flow/future plans.
Return of capital	preferential right to return of capital on liquidation.	no guarantee of return of capital on liquidation.
Voting rights	no right to vote at meetings.	carries voting rights.
Risk	lower risk of loss of capital.	risk bearing capital.
Debt equity	regarded as debt.	regarded as equity.

Current ratio — Defined as: current assets/current liabilities.
In the short term, this is likely to improve as the issue of shares will improve the company's cash position, thereby increasing current assets, and consequently the current ratio. In the longer term however, there is likely to be a lesser improvement in the current ratio. If the expansion for which the funds are to be used is successful, there will be an increase in stock levels as well as the amounts due from customers and payable to suppliers. Overall the increase in current assets (stocks and debtors) is likely to be greater than the increase in creditors, leading to an improvement (probably minor) in the current ratio.

Gearing ratio — Defined as: debt as a % of equity (ordinary shares + reserves)
The effect on the gearing ratio will depend on the type of shares which are issued. As noted above, preference shares will be regarded as debt. This will have the effect of increasing the gearing ratio.
If ordinary shares are issued, the gearing ratio will reduce.

Mark allocation: 1 mark for each valid point, to a MAXIMUM of 8

(b) This observation is not correct. If the proposed leasing arrangement was an operating lease, the value of the assets, and the related requirement to pay leasing rentals in the future would not be reflected, and the finance would therefore be 'off the balance sheet'.

However, the proposed lease arrangement is clearly identified as a finance lease. This means that the accounting treatment is basically the same as it would be if the purchase of the assets was financed by a straightforward loan. The treatment of finance leases is an application of 'substance over form', where the economic substance of a transaction, rather than the legal form, is reflected by the accounting treatment.

This means that a finance lease affects the balance sheet as follows:
Fixed assets will increase
Current liabilities will increase (to reflect the capital repayments due in the next year)
Long term liabilities will increase (to reflect the capital repayments due in more than one year)

This will mean that the ratios will be affected as follows:

Gearing will increase due to the increase in long term liabilities
Current will reduce due to the increase in current liabilities

Mark allocation: 1 mark per valid point, to a MAXIMUM of 8

(c) As noted above, the effect of the leasing arrangement is detrimental to the company, as it will increase the possibility that the terms of the covenant will be breached.

In addition, the fact that preference shares will lead to an increase in the gearing ratio, means that further pressure will be brought to bear on that measure.

A further point to bear in mind is the effect of the dividend. As it is likely that a guaranteed dividend will have to be one of the terms under which the preference shares are issued, there will be an ongoing requirement to pay a dividend. If ordinary shares were issued, this would not be the case.

Mark allocation: 1 mark per valid point, to a MAXIMUM of 4

2 (a) Depreciation is an expense which is charged to reflect the value of economic benefits which have been consumed due to the use of a fixed asset during the accounting period.

This is an application of the accruals principle, under which profit is calculated by charging expenses against profit as they are incurred.

The annual charge is normally calculated on the basis of a predetermined policy. When accounts are prepared, the total depreciation to date is deducted from the cost to arrive at the net book value. It is this value that is reported on the balance sheet.

Impairment is the term used when the value (effectively the market value) of a fixed asset falls below the net book value.

Impairment arises for a reason other than the consumption of economic benefits, for instance damage to an asset, or a change in market conditions.

From the above it follows that the value of economic benefits consumed by using assets should be charged as an expense to the profit and loss account.

It is accepted that freehold land is not consumed by the activities of the business (unless the land is physically damaged, as would be the case in a mining company) and therefore need not be depreciated. On the assumption that the normal activities of Alfield do not damage the land, the policy of not depreciating would appear to be appropriate.

The directors are required to choose the method which is used to charge depreciation. In doing so, they should seek to reflect the consumption of economic benefits which occurs. Once chosen, a method of depreciation should be consistently applied to all assets in a class.

It is often the case that companies depreciate machinery on a straight line basis and vehicles on a reducing balance basis. The straight line basis means that the depreciation charge is the same from year to year, whilst the reducing balance basis leads to reducing charges in each successive year. As vehicles tend to require increasing maintenance expenditure as they become older, the company's policies for these classes of assets would seem to be appropriate.

Mark allocation:	1 mark per valid point, to a MAXIMUM of	6

(b) Depreciation:

Buildings

Cost £180,000, depreciation SL over 30 years

Thus depreciation charge is £6,000 per annum, and the net book value at 30 November 2005 is:

Cost	£180,000	
Less Depreciation to date	£72,000 (£66,000 + £6,000)	
Net book value	£108,000	1

However, the value of the buildings is £100,000. As this is less than the net book value, there has been impairment, and the value must be reduced to £100,000. 1

Plant and Machinery

Depreciation charge is	£248,000 x 15% = £37,200	1

Vehicles

Depreciation charge is		£160,000	
	less	£98,000	
	NBV	£62,000	1
	x 20%	£12,400	1

Revaluation of land:

(Note to candidates:
The directors are not required to reflect the increase in the value of the land in the financial statements, but may choose to do so. However, as the land has not been sold, the increase is not a realised gain. As such it cannot be reported in the profit and loss account, but instead is taken to a Revaluation Reserve.)

Increase in value of land	£480,000 – £450,000 = £30,000	1
		6

(c) Alfield Ltd Revised Draft Balance Sheet at 30 November 2005

	£000	
Fixed assets (W1)	1,636·4	3
Current assets	347·0	$^1/_2$
Creditors: amounts falling due within one year	(264·0)	$^1/_2$
	1,719·4	
Creditors: amounts falling due in more than one year	(150·0)	$^1/_2$
Total net assets	1,569·4	
Capital and reserves:		
Share capital	300·0	$^1/_2$
Retained profit (W2)	1,239·4	1
Revaluation reserve	30·0	2
	1,569·4	

Working 1	£000		
Fixed asset value as given	1,670·0		
add: Revaluation	30·0		1
less: Depreciation/Impairment	(63·6)	(14 + 37·2 + 12·4)	2
	1,636·4		

Working 2	
Retained profit as given	1,303·0
less: Depreciation/Impairment	(63·6)
	1,239·4

3 **(a)** The essential difference between a subsidiary and an associate is:
- a subsidiary is a company over which the investor can exercise control
- an associate is a company over which the investor can exercise a significant influence.

In more detail, control is usually exercised by the investor through controlling the operating and financial policies of the investee, and controlling the board of directors.

On the other hand, if the investor is able to influence, but not control, the operating and financial policies of the investee and has representation on the board of directors, but cannot control it, the investee is an associate.

One aspect of the relationship that is similar in both cases is that the interest held by the investor must be a participating interest. This means that the investment is held for the long term for the purpose of securing a contribution to the activities of the investor.

Mark allocation: 1 mark per point, to a MAXIMUM of 4

(b) **(i)**

Net assets at date of acquisition		£1,800,000		
80% acquired	£1,440,000		1	
Consideration	£1,700,000		$^1/_2$	
Thus Goodwill	£260,000		$^1/_2$	2

(ii) Goodwill amortised over five years, thus annual charge is:

£260,000 ÷ 5 =	£52,000		1

(iii) Two years since acquisition, thus amortisation to

30 November 2005 £52,000 x 2 =	£104,000	1	
Thus unamortised £260,000 – £104,000 =	£156,000	1	2

(iv)

Sashie retained profits at 1 December 2004	£1,257,000		
at acquisition	£1,187,000		
Thus post acquisition profits	£70,000	1	
Group share (80%)	£56,000	1	
Nicie retained profits at 1 December 2004	£3,168,000	1	
Goodwill amortised to 30 November 2004	£(52,000)	1	4
Group retained profits at 1 December 2004	£3,172,000		

(c) **Nicie Group Ltd**
Consolidated Profit and Loss Account for the year ended 30 November 2005

	£000		
Turnover (5,126 + 1,543)	6,669	$^1/_2$	
Cost of sales (3,728 + 1,071)	4,799	$^1/_2$	
Gross profit	1,870		
Expenses (678 + 231 + 52)	961	$1^1/_2$	
Operating profit	909		
Taxation (143 + 41)	184	$^1/_2$	
Profit after taxation	725		
Minority interest (200 x 20%)	40	2	
Group retained profit for year	685		
Group retained profit brought forward	3,172	1	
Group retained profit carried forward	3,857	1	7

Section C

4 To Management Team STL
From A Consultant
Re Business Process Re-engineering

Introduction
This report has been prepared to indicate the positive benefits which STL is likely to experience if business process re-engineering (BPR) is introduced. The recommendations are based on the need of the firm to achieve the following outcomes:

increased flexibility in responding to customer orders
reduced reworking, leading to
reduced costs.

There are a number of further benefits which are likely to be achieved, and these are discussed below (see the section 'Benefits').

(a) Business Process Re-engineering (BPR)
BPR could be described as the fundamental redesign of the activities in a business so that new methods of operation are developed. The objective of BPR is to deliver improved value to the customer.

BPR is carried out by considering each process as if it were only now being initiated. Consequently, the re-designed process is not affected by current practices. This means that solutions are truly innovative.

As well as radically changing activities, BPR will lead to a change in the nature of relationships, by requiring 'traditional' boundaries to be dismantled. This arises because BPR requires a focus on the required outcome, and seeks to remove any barrier to achieving outcomes which meet with customer requirements.

A key element in this is the need for staff to be given (and accept) responsibility for whole tasks, as opposed to parts of tasks.

In STL, we have noted:

- customers are demanding quicker responses to orders
- a high level of re-work is required, leading to reduced profit margins
- staff regard the quality control department as the guardian of quality standards
- the benefit of a skilled and experienced workforce is undermined by the current 'product line' approach.

From the discussion above it can be seen that BPR addresses these issues, and it is therefore reasonable to conclude that STL will derive considerable benefit from applying BPR.

Cellular Manufacturing
Cellular manufacturing is a development of BPR. The key is to arrange production in a manner that allows staff to become multi-skilled, rather than requiring a focus on one specialised activity.

(b) Benefits
The following benefits can be expected from the introduction of cellular manufacturing:

1 Because staff are multi-skilled, they will be more flexible in their work practices, leading to improved production flows and allowing a move to just-in-time manufacturing.
2 Multi-skilled staff can accept responsibility for the whole task. This will facilitate a change in the culture of the organisation, with each worker accepting responsibility for the quality of their work.
3 The fact that staff will be responsible for the whole task will reduce the level of rework.
4 The introduction of flexibility into the production process will allow just-in-time manufacturing to be introduced. This will reduce lead times, assist in responding more quickly to customer requirements, and will lead to a reduction in the level of stock held.
5 The benefits noted at 4 above will lead to a reduction in costs.
6 By recognising and making better use of staff skills and increasing the responsibility of staff, the workforce should be better motivated. This will contribute to the benefits noted above.
7 The improved motivation and skills of the workforce are likely to lead to an improvement in the quality of output.

(c) Quality improvement
A quality improvement programme is likely to improve margins by:

- reducing the level of rework. Every time an activity has to be repeated, STL incurs an additional, and unnecessary, cost.
- by allowing staff to fully utilise their skills, motivation will be improved. Staff who are motivated will have a pride in their work. If this enhanced pride is part of a company wide focus on quality, there will be a higher incidence of 'getting it right first time'. These two factors will contribute to a reduction in reworking.
- as each member of staff will be responsible for the quality of their own work, any errors will be corrected more quickly. This means that, even when rework is necessary, it will be less than is currently required, as the errors will not have been compounded at successive stages of production.
- at present there is a considerable burden on the quality control function. Any unacceptable production must be identified at the quality control stage. It is therefore possible that defective items could be delivered to customers. This will lead to a reduction in reputation and customer satisfaction. By achieving higher levels of customer satisfaction, STL will be in a position to seek a 'quality premium' in the selling price.

– the combination of lower costs and premium prices will lead to improved margins.

(d) Benefits to staff

Staff will benefit as follows from the initiatives:

Greater job satisfaction	as staff will be required to use a full range of skills, and will be responsible for the whole task, rather than repeatedly carrying out a single operation, job satisfaction will be improved.
Improved team spirit	as production will be more collaborative, a supportive environment will be fostered. This will facilitate team members supporting each other, perhaps through sharing of skills. This will replace the 'inquisitive' nature of the current approach to quality control.
Improved remuneration	the higher level of responsibility which staff will accept is likely to lead to improved rates of pay.

Mark allocation

(a)	1 mark per valid point, to a MAXIMUM of	6
(b)	1 mark per valid point, to a MAXIMUM of	4
(c)	1 mark per valid point, to a MAXIMUM of	4
(d)	2 marks for each valid benefit, to a MAXIMUM of	6
		20

5 (a) (i)

			Jan			Feb		
		Roges	Grarom	Miley	Roges	Grarom	Miley	
Sales volume	units	4,000	3,100	2,400	4,400	3,500	2,100	
Op Stock volume	units	400	2,900	800	1,000	500	1,800	
Cl Stock volume	units	1,000	500	1,800	1,000	500	1,800	
Stock inc/(dec)	units	600	–2,400	1,000	0	0	0	
Production volume	units	4,600	700	3,400	4,400	3,500	2,100	
Mark allocation	Sales volume		2					
	Stock movement		2					
	Production volume		2					6

(ii)

			Jan			Feb		
		Roges	Grarom	Miley	Roges	Grarom	Miley	
Materials per unit								
Alox	kg	8	11	15	8	11	15	
Leick	kg	6	9	11	6	9	11	
Materials usage								
Alox	units	36,800	7,700	51,000	35,200	38,500	31,500	
Leick	units	27,600	6,300	37,400	26,400	31,500	23,100	
Total usage for month								
Alox			95,500			105,200		
Leick			71,300			81,000		
Mark allocation			2			2		4

(iii) Alox

Op Stock volume	kg	2,400		21,040	
Cl Stock volume	kg	21,040	(W1)	24,040	
Stock inc/(dec)	kg	18,640		3,000	
Purchases	kg	114,140		108,200	
Mark allocation		1		1	2

Leick

Op Stock volume	kg	4,800		16,200	
Cl Stock volume	kg	16,200	(W1)	18,480	
Stock inc/(dec)	kg	11,400		2,280	
Purchases	kg	82,700		83,280	
Mark allocation		1		1	2
					4

Working 1

The closing stock of material for February is to be equal to 20% of the usage for March. As opening stock of finished goods for March is equal to closing stock, production volume is equal to sales volume.

Therefore the material usage is:

Alox	(4,600 x 8) + (3,900 x 11) + (2,700 x 15) =	120,200 kg
Leick	(4,600 x 6) + (3,900 x 9) + (2,700 x 11) =	92,400 kg

Closing stock is 20% of usage: Alox 120,200 x 20% = 24,040 kg
Leick 92,400 x 20% = 18,480 kg

(b) **From** Operations Manager
To Sales Manager
Re Proposed commission arrangements

(i) With reference to your proposal of paying commission based on sales revenue, we should note that it is generally accepted that an effective incentive scheme should have a number of characteristics, including:

- the incentives should be perceived as worthwhile by the recipients
- better performance should be rewarded by greater incentives
- the rules and the basis for the calculation of the incentives should be clear
- the recipients should have control over their performance on which the incentives are based
- the scheme should be cost effective
- the scheme should motivate performance towards the achievement of key company goals.

(ii) Whilst your suggestion has merit, I am concerned that it could lead to problems, such as:

- unless the scheme provides the opportunity for salespersons to increase their remuneration, it is unlikely to have a positive motivational effect. Thus the proposed commission will increase our cost base.
- basing the commission solely on sales revenue will encourage the sales team to seek sales of the product with the highest unit revenue. We have not assessed the relative profitability of each product, so there is a danger that the resulting sales could reduce our profitability.
- we have not discussed the external influences on sales volumes. For example, the estimated sales volume of Grarom in March is almost 26% higher than the estimated volume in January. If this is due to factors outside the control of the sales team, the incentive will not be effective.

Mark allocation:

1 mark for each characteristic, to a MAXIMUM of	3
1 mark for each problem, to a MAXIMUM of	3
	6

6 **(a)** Cost per unit:

	STA	RPA	MNA
	£	£	£
Direct material	95·00	108·00	125·00
Direct labour	85·00	98·00	106·00
Machine running (W3)	14·00	28·00	49·00
Production set up (W4)	2·97	2·76	2·56
Order processing (W5)	3·26	2·74	1·80
	200·23	239·50	284·36

Working 1 Cost per unit of cost driver

Cost pool	Cost driver	Total cost	Cost driver volume	Cost per unit of cost driver
Machine running	Machine hrs	£4,655,000	133,000 (W2)	£35·00
Production set up	Prodn. runs	£460,000	100	£4,600·00
Order processing	Orders	£443,300	806	£550·00

Working 2 Total machine hours

	Production volume (units x 1,000)	Machine hours per unit	Total machine hours x 1,000
STA	65	0·4	26
RPA	55	0·8	44
MNA	45	1·4	63
			133

Working 3 Machine running cost per unit produced

STA	£35·00 per hour	x 0·4 hours per unit	=	£14·00
RPA		x 0·8 hours per unit	=	£28·00
MNA		x 1·4 hours per unit	=	£49·00

Working 4 Production set up cost per unit produced

STA	£4,600 per set up	x 42 set ups ÷ 65,000 units	=	£2·97
RPA		x 33 set ups ÷ 55,000 units	=	£2·76
MNA		x 25 set ups ÷ 45,000 units	=	£2·56

Working 5 Order processing cost per unit produced

STA	£550 per order	x 385 orders ÷ 65,000 units	=	£3·26
RPA		x 274 orders ÷ 55,000 units	=	£2·74
MNA		x 147 orders ÷ 45,000 units	=	£1·80

Mark allocation:

Cost pools and cost drivers	3 x $^1/_2$	=	$1^1/_2$
Cost per unit of cost driver	3 x $^1/_2$	=	$1^1/_2$
Cost per unit produced:			
Machine running	3 x $^1/_2$	=	$1^1/_2$
Production set up	3 x $^1/_2$	=	$1^1/_2$
Order cost	3 x $^1/_2$	=	$1^1/_2$
Total cost	3 x $^1/_2$	=	$1^1/_2$ 9

(b) (i)

	STA	RPA	MNA	
	£	£	£	
Selling price per unit	320·00	360·00	450·00	
Variable cost per unit	180·00	206·00	231·00	
Contribution per unit	140·00	154·00	219·00	1

If no action is taken:

Product	Sales volume units x 1,000	Contribution per unit £	Contribution Total £000	prob.	£000	
STA	48	140·00	6,720·00			
RPA	40	154·00	6,160·00			
MNA	36	219·00	7,884·00			
			20,764·00	·15	3,114·60	1
STA	51	140·00	7,140·00			
RPA	42	154·00	6,468·00			
MNA	38	219·00	8,322·00			
			21,930·00	·45	9,868·50	1
STA	56	140·00	7,840·00			
RPA	46	154·00	7,084·00			
MNA	42	219·00	9,198·00			
			24,122·00	·40	9,648·80	1
					22,631·90	1

(ii)

Product	Sales volume units x 1,000	Contribution per unit £	Contribution Total £000		
STA	57	135·00	7,695·00	Sales volume	1
RPA	47·5	149·00	7,077·50	Contribution pu	1
MNA	42·75	214·00	9,148·50		
			23,921·00		1
		less: cost of initiative	120·00		1
		net contribution	23,801·00		1

As the contribution is greater than the expected contribution if no action is taken, the substitute material should be used and the initiative undertaken.

Mark allocation — Conclusion consistent with results obtained 1